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ABSTRACT

During the next few years, postsecondary education in the United States will undergo some important changes. Students will be older on the average; innovations will alter both course content and structure; and more education will take place outside the traditional system. Nine topic areas have been isolated that are believed to be of high priority in postsecondary funding. Each might well serve as a focal point for the programs of an educational foundation. The nine areas evolve from the concept of "educational need"--particular groups in society whose needs will grow in the next decade, a place or medium that will have growing educational possibilities, or an innovative program that might serve the needs of a wide range of special interest groups. The nine areas are: (1) self-assessment; (2) public libraries as adult education centers; (3) the telephone in education; (4) health education; (5) the adult illiterate; (6) the elderly; (7) low-income women; (8) prisoners; and (9) midlife or midcareer education and retraining. A reading list is provided. (Author/MSE)

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Priorities in Postsecondary Education

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Carreen Jensen
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INSTITUTE FOR THE FUTURE

R-36

A report of research conducted under a grant from the Arthur Vining Davis Foundations

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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PRIORITIES IN POSTSECONDARY EDUCATION

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2740 Sand Hill Road
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PREFACE

During the next few years, postsecondary education in the United States will undergo some important changes. Students will be older on the average; innovations will alter both course content and structure; and more education will take place outside the traditional system.

The purpose of this report is to take a new look at postsecondary funding priorities in light of these changes. We have isolated nine topic areas which we believe to be of high priority. Each might well serve as a focal point for the programs of an educational foundation.

The nine areas evolve from the concept of "educational need"--particular *groups* in society whose needs will grow in the next decade, a *place* or *medium* which will have growing educational possibilities, or an *innovative program* which might serve the needs of a wide range of special interest groups. Some of the areas may be new to the reader. Even in the more familiar areas, we've added a new "twist" or two. In all cases, the discussion of the topic area is followed by a list of program recommendations. These are programs which represent what we feel to be high-leverage, private-sector funding opportunities--programs in which a relatively small amount of money might make a real difference. A supplementary reading list is also included.

Self-Assessment

Part I. Questions [1]

A. Program Structure and Modularity

1. From the viewpoint of maintenance, which one of the following is generally considered to be the most important consideration when establishing the size of a program module during program design?
   (a) it should not be longer than one coding sheet
   (b) it should fit in less than one page of memory
   (c) it should be small enough to comprehend
   (d) it should not exceed the maximum disk block size

2. Consider the following routine written in a procedural language:

```
MODULE FACTORIAL (N);
RETURN (IF N < 3 THEN N ELSE
   FACTORIAL(N-1)*N);
END FACTORIAL;
```

   Which phrase below is the best description of this routine?
   (a) an iterative function (c) a two-section function
   (b) a recursive function (d) a structured function

3. The three main control structures recommended by advocates of structured programming are:
   (a) sequential, recursion, and iteration
   (b) call, close, and conditional
   (c) dimension, call, and format
   (d) sequential, conditional, and iteration

4. Consider the following fragment of code:

```
I:=1;
CASE I+3 OF
   I:=1;
```

7. Assuming that the linkage in question 5 is implemented as call-by-name, the value of 'Z' that will be printed is:
   (a) 4 (b) 5 (c) 6 (d) 7

Part II. Suggested Responses

1 c, 2 b, 3 d, 4 d, 5 b, 6 d, 7 c, 8 a, 9 c, 10 c,

Part III. Suggested References

Question No.

1. Yohe, J. An overview of programming practices. *Computing Surveys 8*, 4 (Dec. 1974), 228.
   Aron, J. *The Program Development Process.* Addison-Wesley, pp. 99-102.
2. Elson, M. *Concepts of Programming Languages.* Science Research Associates, pp. 177-187.
3. Nicholls, J. *The Structure and Design of Programming Languages.* Addison-Wesley, pp. 17-18.
4. Pratt, T. *Programming Languages: Design and Implementation.* Prentice-Hall, pp. 143-144.
5. Gries, D. *Compiler Construction for Digital Computers.* Wiley, p. 188.
   Nicholls, *op. cit.*, pp. 503-505.
   Elson, *op. cit.*, pp. 77-79.

How can you compare what you do know in a given subject area with what you "should know"? What then can be done about your "deficiencies"?

Self-assessment is an innovative approach to these very basic educational problems.

SELF-ASSESSMENT

Consider the possibility of running a school like a hospital.[2] Universities might admit patients (students) whenever they need treatment (education). Upon arrival, a diagnosis determines the holes in the student's knowledge. The role of the educational process, then, is to fill in these gaps.

Today, this "diagnostic" approach to learning is already in evidence in the area of educational self-assessment. In the past few years, procedures for assessing "what it is you don't know" and "where you can go to fill in the gaps' have begun to spring up in medicine, dentistry, and computer programming. These procedures are straightforward:

- First, a panel of experts determines what a modern physician should know about neurology, for example. Emphasis is often given to the most recent developments.
- Next, a multiple choice test is devised for important developments and is distributed to participating physicians.
- Then, physicians take the test at their leisure and in private, scoring their own tests.
- Finally, explanations of all correct and incorrect answers are provided. In addition, the testing package lists reference materials for further reading if a physician needs it.

A "SENSIBLE" APPROACH

Self-assessment, then, is a streamlined version of traditional learning methods. And for some types of learners, it makes a great deal of sense.

Sara Boehm is a practicing pediatrician in rural Minnesota. Fifteen years out of medical school, Sara is well regarded by both her peers and her patients. Yet she has some nagging doubts about the effectiveness of her practice:

"I try to keep up with current developments in my field, but realistically I just don't have time. My work occupies over 60 hours of my week, and I have to spend some time with my family. There's no school that I can go to that specializes in 'brushing up,' and even if there were, I doubt I could afford the time to go. If I'm lucky, I can make it to one of the pediatric conventions each year, but all these do is to increase my fears that there may be new medical developments and drugs that I really should know about but don't. The frightening thing is that time is working against me. As things stand now, I can only get more and more outdated."

Or take the case of Willis Jensen who, for over 20 years, has held financial administration posts at a private midwestern college. He is currently the school's controller:

"I feel I've kept up pretty well with developments in my profession although I admit I used to do a better job than I do now. I've always believed that the way to learn is to ask a lot of questions, but as we get older, we often get a little hesitant to ask--especially of people younger than ourselves. I have to admit that I've come out of some meetings lately with a couple of the younger accountants and grants administrators--and I didn't understand some of the things they were talking about. . . . No, I didn't ask them because they work for me, and it's important that I don't lose their respect by asking a lot of silly questions."

Both Dr. Boehm and Mr. Jensen are prime candidates for a self-assessment approach to learning. So are many people in the following types of target groups.

Those threatened with technological obsolescence. Most everyone has heard of the Peter Principle which claims that individuals tend to rise in organizations to their level of incompetence. Paul Armer has added the "Paul Principle." According to him, people often become incompetent at a level at which they once performed well because they become uneducated (obsolete) for that level.

Every worker faces obsolescence to some degree. But in some fields, where the pace of technical change is rapid, obsolescence is a way of life. For example, H. Bentley Glass, President of the American Association for the Advancement of Science, said, "A scientist must constantly renew, extend, and reorganize his knowledge, or in approximately eight years he will be beyond hope as teacher or practitioner."[3]

It is a good bet that much the same conclusion could be drawn for other rapidly changing fields--engineering, medicine, and data processing, for example. The cost of such obsolescence is borne not only by individuals and their families (where the cost can be both financial and psychological) but also by society as a whole. No one could even begin to guess the total costs in dollars or, in some cases, lives, of "not keeping up with my profession." Self-assessment seems a relatively simple way to do just that--to keep up.

Older (over 25) students. Older students often have jobs, families, and a great number of demands on their time. Efficiency in delivery should be the goal of any educational system geared to their needs. Yet, like the primary system, the traditional postsecondary system today places almost no value on the time of the student. Most older students already know something about the subject they are pursuing. Thus, an important way to reduce students' learning time is to compare what they know with what they should know and then to address the gaps in their knowledge. There is no reason for them to sit through a 10-week course if they already know seven weeks' worth.

Those with psychological barriers to traditional education. Willis Jensen, the financial administrator, is not atypical in his hesitation to ask questions of his younger colleagues. People who have fears of being a bit obsolete almost always have a sense of insecurity about their condition. They generally avoid any situation which would display their ignorance to others. A self-administered test permits them to discover their level of knowledge in complete privacy; it thus minimizes the psychological threat to those taking the test. They can hide in their closets and take the test by flashlight if they wish.

THE FUTURE OF SELF-ASSESSMENT

There is little doubt that self-assessment procedures will be in increasing demand. We are experiencing an aging of the population in the United States; this trend will surely result in more focus on the delivery of educational services to older populations with entirely different needs and time constraints from today's college freshmen. And it is clear that the pace of technological change will continue to accelerate, thus demanding new ways to refurbish and retrain those hit by obsolescence.

Furthermore, in many professions, public concern about the competence of practitioners may eventually result in testing procedures for recertification every few years. Even today, these pressures are being vented in the legislatures of a number of states--particularly California and Florida--in which continuing education is a prerequisite to renewal of licenses. Among the professions under particular scrutiny are medicine, nursing, pharmacy, osteopathy, dentistry, law, and nursing home administration.

In view of these trends, program development in the area of self-assessment may take high educational priority.

RECOMMENDATIONS

There are a number of funding tacks that would help catalyze the use of self-assessment techniques in education:

- *Test development in new fields*. At present, most self-assessment tests (and there are not many) are concentrated in professions where refurbishing problems are particularly severe and the professional associations are "wealthy." Medicine is the prime example here. But there are many other fields where the concept of self-assessment seems appropriate, and some initial funding might prove to have great leverage. For example, it is not difficult to imagine the *development of effective tests in education, counseling, financial administration, science, engineering, and law*. The concept of *self-assessment might also be extended to the trades;* most trades

have associations which could distribute tests to keep their membership up to date on new techniques and technologies.

- *Self-assessment clearinghouses*. Self-assessment tests are not easy to develop. Someone must decide what the individual should know and what the best references on the topic are. The tests, to be effective, must continually be revised. And nobody is quite sure how well they work. Do "students" retain self-testing information as well as that gained through traditional means? We really don't know.

  The *funding of central clearinghouses* would permit continual revision and evaluation of self-assessment tests. Professional associations or a professional testing organization would seem the logical home for such activities. Test revisions and updates could be based on "problem areas" in previous years, and feedback could be centrally gathered and analyzed. The establishment of a testing clearinghouse could also lend an aura of "permanence" to self-assessment. The test-taker, instead of feeling that the test is a one-time effort to find out how much he or she knows about workmen's compensation, for example, might be more inclined to view continuing tests as an effective means of "keeping up" with developments in workmen's compensation.

- *New self-assessment applications*. Self-assessment has been viewed as a tool for *vocational* learning--for keeping up with developments in a given profession. And because professionals are not generally well-served by traditional educational systems, this emphasis is justified. Yet, there is no reason why self-assessment techniques can't be applied in everyday learning situations. Such applications can range from inquiries into a particular interest area--"What are some unusual photographic printing techniques?"--to very pragmatic personal welfare issues--"What do I know and what should I know about consumer law, tenants' rights, nutrition, or the

causes of heart disease?" Thus, funds could be aimed at *developing a series of self-assessment tests in a variety of interest areas;* these tests would be made available to the general public through libraries and adult education centers.

FOOTNOTES

[1]Association for Computing Machinery Ad Hoc Committee on Self-Assessment, "A Self-Assessment Procedure," *Communications of the ACM,* vol. 19, no. 5, 1976.

[2]This idea was suggested by C. Jackson Grayson, Dean of the School of Business Administration at Southern Methodist University.

[3]H. B. Glass, "Letter from the President," *AAAS Bulletin,* September 1969.

Public Libraries as Adult Education Centers

George, a Kansas retired man interested in gems and minerals, had lately gotten involved with jewelry-making as an extension of his rock and mineral collecting. He came to the library for materials and guidance. In addition to locating books on silver casting, the librarian recommended local craftsmen who might demonstrate their techniques and guided George to the library's audio-visual instructional center. Through these efforts, George was able to watch a videotape presentation on the work of Indian silversmiths in New Mexico and visit a nearby silversmith who helped him master new skills.

PUBLIC LIBRARIES AS ADULT EDUCATION CENTERS

Take a walk through just about any community--rural or urban, rich or poor--and chances are, you'll find a library. You'll find a storehouse of basic learning resources, such as books and records, magazines and newspapers. And you'll find librarians, specially trained to help people use these resources. Now take a look at the adult learners in the community. They often need guidance and counseling in their special areas of interest. And perhaps most important, they need convenient access to learning resources. Libraries and adult learners? It's a promising match.

THE PROMISE OF THE LIBRARY

Community libraries could easily become community adult education centers with a wide range of possible services. They might, for example, offer educational counseling and referral programs. Many adults do not pursue further education simply because they don't know what's available. In a recent nationwide survey, 16 percent of those who were interested in continuing their education claimed that lack of information about opportunities was the major obstacle.[1] A library referral service could eliminate this obstacle:

> Look at Jim Hansen. He's a clerical worker who likes to work with figures and has wondered about developing skills to become an accountant. But he doesn't know where to go to find out about the occupational requirements of accounting. What would be the best learning arrangements for him, he wonders. What courses are offered by local educational institutions? What alternatives, such as TV courses or private tutors, should he consider?

At a library referral center, Jim could learn about the job opportunities for accountants. The librarian could refer him to local public and private agencies which provide career counseling to adults. After he had

pursued these leads and clarified his occupational goals, he could make a second visit to the library's information and referral service, this time to discuss study programs. The librarian would describe available courses, including their schedules and costs. And in the course of their discussion, the librarian could help this potential student decide among alternatives.

A library-based education center could do more. It might become a primary resource facility for the independent adult learner. For a variety of reasons, many adults pursue learning projects on their own. The scheduling, location, or cost of formal instruction may be a hindrance. In addition, some adults simply prefer self-organized learning. They may want instruction which directly relates to their personal objectives; has a problem-oriented, rather than a disciplinary, focus; and can be pursued at an individual pace.

Consider what a library might do for someone like Jane Braccini, for example:

> Jane, a mother of several college-aged children, came to the public library to pursue a newly awakened interest in American history. During the initial interview, the librarian established that Jane was interested in history primarily for personal enrichment. Together, they determined that Jane did not want a structured learning situation. The librarian then prepared a bibliography of standard works on American history for Jane's use. As the project progressed, the librarian discussed Jane's reading with her and suggested other sources she might want to consult.

Regardless of their reasons for pursuing self-organized learning projects, independent adult learners often lack the support provided students at formal educational institutions. However, as Jane discovered, public libraries could provide educational aids to assist independent learners in organizing their studies. Librarians trained to act as advisors could help independent students clarify the scope of their interests and could also help them structure a sequence of learning activities. A library learning center might provide independent students with reading lists on several subjects. Directories of community resource people might also be part of the library's information/learning services.

SOME PIONEER PROGRAMS

The pioneers among libraries have already taken the first steps toward becoming adult education centers. In nine cities across the country, for example, public libraries recently joined in a pilot project to develop "learner's advisory services," providing individualized attention to library users with specific interests or educational goals. The program was designed to help them locate not only library materials, but also people, programs, and other outside resources appropriate to their needs.

The project was sponsored by the College Entrance Examination Board's Office of Library Independent Study and Guidance Project. CEEB provided basic training programs for librarians, as well as research, evaluation, and promotional services. The nine participating libraries were responsible for operating costs and staff resources to implement the service. While CEEB has not completed its evaluation of the pilot program, its success is already apparent. The libraries continue to offer learner's advisory services, even without CEEB's support. Furthermore, they have formed a Consortium of Public Library Innovation to share their experience with other libraries and to help them develop their own information services.

And the idea does seem to be spreading. In New York, a statewide library program has been established to assist the independent learner; in Baltimore, the Enoch Pratt Public Library has developed a special program to assist adults seeking to obtain college credit through the College Level Examination Program. The American Library Association is establishing a section to focus on the needs of independent adult learners.

"Study Unlimited" demonstrates still another approach to library-based education. Developed jointly by the Chicago Public Library System and the City Colleges of Chicago, the program offers video cassette courses in such areas as social science, child development, and data processing. The library provides the study sites, while the colleges develop the cassette curricula and provide credit for those who pass the exams. Thus, this cooperative venture provides an opportunity for adults to follow an organized course of study at their own pace and at times convenient for them, with an option for obtaining college credit.

RECOMMENDATIONS

There are over 7,000 public libraries in the United States--about three times the number of colleges and universities. Once dedicated to "building the best possible collection," these libraries have recently turned their attention to the community, inaugurating outreach programs like children's story hours, public film showings, and lecture series. The adult education center would thus be a natural extension of the library's emerging community service role. But assistance is needed to help make such programs effective:

- *Librarian training*. Extensive preparatory workshops for library staff contributed to the effectiveness of the CEEB pilot project to serve independent adult learners. The purpose of these workshops was to provide librarians with a general understanding of the needs of library students--how they learn, how to diagnose their learning needs and select appropriate study materials, how to help them plan their independent studies. Additionally, the development of referral services which can act as information clearinghouses for adult learners deserves adequate attention.

  The Foundations might, therefore, assist libraries in developing independent study and referral service programs by funding *a traveling workshop series for librarians*. Serving the adult learner might also be the focus of *in-service, continuing education for librarians* as well as *part of the standard curriculum in library science programs*. In these activities, the Foundations might join forces with the Consortium on Library Innovations and the American Library Association Section on Adult Learners to take advantage of their technical expertise.

- *Library study aids*. The library student lacks many of the study aids routinely provided to the classroom student. The mimeographed course outline, the supplemental reading list, the assigned problems and essay questions, and films shown in class all help classroom students organize their learning. Unfortunately, the

preparation of such materials for each independent learner is very time-consuming--libraries in the CEEB pilot project reported spending three to five hours to prepare each study guide.

The use of libraries as independent learning centers could thus be fostered by the *development and distribution of study guides on subjects widely requested*. Libraries could use these ready-made guides whenever appropriate, or they could tailor them to learners with special needs. *Audio and video cassettes* are another learning tool that can bring leading authorities to the student, dramatizing special issues and providing structured learning for students who relate better to nonwritten materials. Since the preparation of cassettes is generally beyond the resources of individual libraries, it is a good candidate for outside assistance.

- *Library study for credit*. For those who desire college credit but lack access to a college campus, programs like Study Unlimited in Chicago serve a real need. Such programs feature cooperative arrangements between area libraries and a traditional educational institution to bring self-paced, individualized learning, with credit, to adult learners. The college can provide curricular modules, including study guides, reading lists, videotapes and cassettes; it can also administer examinations and award credentials. Libraries then serve as auxiliary learning centers, providing inexpensive and convenient access to multimedia learning. To promote such cooperative arrangements, the Foundations could support *library-college consortia*, particularly in rural areas.

FOOTNOTE

[1]Abraham Carp, Richard Peterson, and Pamela Roelfs, "Adult Learning Interests and Experiences," in K. Patricia Cross, John R. Valley & Associates, *Planning Non-Traditional Programs*, San Francisco: Jossey-Bass, 1974, p. 46.

The Telephone in Education

In the middle of a busy day in his Portsmouth, Virginia, music studio, David Carr Glover stopped for an hour to discuss his work with piano teachers. The teachers, far from sitting at his feet, were scattered among 70 cities--primarily in rural Wisconsin. They had each paid six dollars for the complete course, taught by the likes of Glover, Gina Bachauer (in Michigan), and John Perry (in Texas). They met, not in a single classroom, but over a telephone network.

THE TELEPHONE IN EDUCATION

Picture a network which can link any seeker of information with an information source in a matter of seconds and you get a feeling for the real educational potential of the telephone. Over 150 million telephones blanket the country. They are inexpensive and almost universally accessible. With them, physical barriers to communication--great distances, bad weather, mail and travel delays--become nonproblems. Social barriers, too, can disappear. If people can listen and speak, they can make full use of the resources of the telephone and participate on an equal basis with others. Small wonder, then, that the telephone is beginning to emerge as an educational technology of impressive potential.

THE TELEPHONE--AN INTERMEDIATE TECHNOLOGY

The 1960s was an era of elaborate educational technologies. Universities and colleges spent staggering sums on dial-access systems for tapes and films. They promoted computer-assisted instruction as a "more efficient way to teach." But from the vantage point of the 1970s, such technologies appear to have been oversold. They simply haven't been as successful as their users had hoped.

The telephone is a different kind of technology--an intermediate technology. It can provide a "classroom" for about 25 cents an hour. The equipment can be as simple as a normal telephone handset, or it can include special telephone lines for group conferencing in permanent conference rooms. An electronic chalkboard, using normal, inexpensive telephone lines, can allow written communication. And while such a technology may not glitter as much as CAI or dial-access systems, it's working well for several universities:

* * * * *

The British Open University tries to reach the unconventional student, the one who cannot attend daily classes on a regular campus. It provides printed texts, radio and television broadcasts, and periodic tutorials for those who can attend. In 1974, it inaugurated telephone tutorials. Students can now watch televised classes over broadcast television in their own homes. Following the program, a small group of students "meet" with a faculty member in a telephone conference call to discuss their questions and reactions.

* * * * *

In South Carolina, those in search of graduate training may now enroll in a program popularly called the "Party Line MBA." Students attend evening courses via television, telephone, and visits to one of 12 special learning centers. Like their British counterparts, they watch programs and then pick up party line telephones to discuss the coursework with their professors.

* * * * *

Perhaps the most extensive program to rely on the telephone is based at the University of Wisconsin-Extension. Its Educational Telephone Network, with portable equipment in 200 courthouses, extension offices, campuses, libraries, and hospitals, has been in operation for 10 years. Typically, students go to the nearest ETN site; they may be alone at their location, or they may gather around a table with other students. The students each have their own microphone, and they can hear all 200 ETN locations and can speak to all other participants. Their instructor is often at one of the University's campuses, but lecturers in other states can be plugged into the system too. Thus, it is possible for music teachers in Wisconsin to meet with leading musicians throughout the country for only six dollars per course.

ETN courses include pharmacy, medicine, English, law, social work, home economics, library science, education, agriculture, engineering, and many, many more. These are usually noncredit courses

for professional adults who want to keep abreast of new developments in their fields. But the University does offer some telephone courses for credit, like a foundations course for an MBA degree which meets for 2-1/2 hours once a week. In all, over 20,000 students use the Wisconsin system each year.

* * * * *

Similar programs exist, on a smaller scale, at the University of Quebec, the University of Illinois, and the University of Minnesota. All of these schools stress a common theme: teaching by telephone is convenient. And in many cases, convenience will be the difference between learning and not learning.

THE TELEPHONE STUDENT--REACHING OUT

Who are these telephone students for whom convenience is so important?

Many are working adults. With rapid advances in knowledge and concerns for professional accountability, teachers, doctors, lawyers, and engineers must continuously update their education. Nonprofessional workers, too, are increasingly looking to education to improve their job opportunities or just to learn for learning's sake. But for these people who work full-time and perhaps have families to raise, convenience of access to education is more than a luxury; it's a necessity. If access is not convenient, the worker will not enroll.

Access is an obstacle for rural students, too. And as more people choose rural lifestyles, the number of rural students will grow. The telephone not only links those in remote areas to an instructor, it also links them to other students. "Without these calls, I would have been completely on my own," reported one student who liked the feeling of "belonging" to the British Open University without ever attending classes on campus.[1]

Finally, the telephone perhaps offers the most dramatic potential for the handicapped. To a person in a wheelchair, the steps leading to the

classroom building can be a major obstacle to education. The telephone brings the classroom to such a student. It also brings learning to the blind and bedridden or even the homebound elderly.

Students who have used the telephone in their studies have some good things to say about it. Most important, it's convenient. But many students feel it improves the quality of their learning, too. They can concentrate better via telephone. And participation is more controlled because the conversation is often more structured. "I am not one to speak up," reported a British Open University student, "but the tutor pulled me in."[2] Anonymity is an advantage, too. "If you burn with embarrassment, it's in your own living room. If you look silly, nobody knows you anyway."[3] Finally, telephone students like being on their home turf, with easy access to their own reference materials.

RECOMMENDATIONS

At present, the telephone is a sleeping giant in the world of education. Its potential has been demonstrated, but it needs to be packaged for more people in more settings. The following options seem particularly attractive:

- *Telephone teaching curricula*. So far, the telephone has been used for scattered courses, primarily in a "continuing education" fashion. No one has taken a broad, comprehensive view of the potential for the telephone in teaching complete programs aimed at the most likely telephone students. A first step in developing curricula for telephone might therefore be to *review all of the courses which are presently taught by telephone* to see who is doing what and how it works. Then, it should be possible to *develop special-purpose telephone curricula*, such as *agricultural programs for rural students* or *vocational education for working adults*. Also, the Foundations could *work with existing organizations for the handicapped* to develop curricula matched to their needs.

Another opportunity for curriculum development is *"telephone plus" courses*. A few of the current telephone courses include television, and most use a package of textbooks and printed materials. But the scope of telephone programs could perhaps be extended considerably if they included the telephone plus two classroom meetings or a weekend retreat or even a faculty "circuit rider."

- *Teacher training*. Typically, when teachers are asked to teach their courses by telephone, they have already been teaching them face to face for some time. They know what works in the classroom, but they may not know what works on the telephone line. For example, an informal discussion may be comfortable in a classroom, but most telephone students complain about too much informality on the telephone. Perhaps the lack of visual cues makes a strong leader more important in telephone teaching. To help teachers make the transition from classroom to telephone, the Foundations might *develop a catalog of telephone teaching styles* and, based on this catalog, *prepare teacher training packages* for schools which want to begin using the telephone in education.

- *Portable new knowledge centers*. There are lots of small research groups which are developing practical technologies in new fields, such as organic farming or solar energy production. These organizations are not schools, and teaching is not their first priority. But because their research-in-progress has immediate practical applications, lots of people want to learn from them. Portable telephone learning could help. The feasibility of such teaching programs might be tested by *supporting a pilot program to disseminate new knowledge*. This program would be conducted by one or more research groups and would demonstrate the practicality of various telephone teaching arrangements for noninstitutional education.

FOOTNOTES

[1]Sue Holloway and Sandy Hammond, "A Study of Users' Reactions to Two Telephone Teaching Systems at the Open University," in *The Status of the Telephone in Education*, Madison, WI: University of Wisconsin-Extension, 1976, p. 117.

[2]Ibid.

[3]Ibid., p. 118.

Health Education

The Montanos are a family of medical experts--even five-year-old Sheba. Sure, they have a licensed M.D. as a resource person. But they like to think of themselves as their own doctors--and most of the time, that means "keeping healthy" instead of "treating illnesses." Christina inaugurated the family's health education program after the birth of their last child, when she participated in an experimental program to "take health education home." Now, aided by televised "self-tests" and PBS specials, the entire family is building its own health program, including physical activities, nutritional planning, and even some "health games" for the children. It's much better than a lot of doctor's bills, Christina will tell you.

HEALTH EDUCATION

A revolution is brewing in health care. Crowded waiting rooms, high costs of medical treatment, and dissatisfaction with the results of treatment have created many dissidents among patients. They have their revolutionary slogans like, "Your health is up to you." And "Be your own physician." They also have a potentially powerful weapon--health education.

TRADITIONAL MEDICINE IN TROUBLE

The traditional health delivery system--with its emphasis on treatment more than on prevention of illness--is in trouble:

> For the great majority of Americans, the "health care crisis" is an ongoing crisis of survival. . . . Health care is scarce and expensive. . . . It is dangerously fragmented, and usually offered in an atmosphere of mystery and unaccountability. For many, it is obtained only at the price of humiliation, dependence, or bodily insult.[1]

There are horror stories, too, about medical incompetence. A North Carolina study judged 44 percent of rural practitioners to be inadequate--in most cases, strikingly so. The New York Academy of Medicine studied prenatal mortality and concluded that 44 percent of deaths in mature infants and 29 percent in premature infants were potentially preventable. In 80 percent of these deaths, there were errors of medical judgment. Furthermore, the United States has a much higher surgery rate than many other countries, and up to 40 percent of all surgeries may in fact be unnecessary.

Beyond these indictments are suggestions that the treatment emphasis itself may be obsolete. In 1900 in the United States, the most prominent fatal diseases were pneumonia, influenza, and tuberculosis. Today, they are cancer and heart disease. The causes of former killers invite a direct medical solution. But cancer and heart disease appear, for the most part, to be products of environmental factors and patterns of

individual behavior. Thus, while the key to large-scale reductions in the turn-of-the-century diseases was medical technology, the key to large-scale improvement in health today is most likely an entirely different approach. This shift is summarized in the following:

> The era of dramatic reductions in death and disease appears to have ended. What are left are the chronic diseases for which the researches are lengthy and costly; issues of contamination of the environment for which the resolutions in part pose serious threats to the economy; and problems of human health behavior for which not enough is known and too little is done about that which is already known. . . . The gap between what is known to be good for personal health behavior and what is practiced is wide and getting wider.[2]

We know, for example, that smoking, alcohol, stress, improper diet, and lack of physical activity are likely responsible for the majority of health problems and, in particular, for the preponderance of cancer and heart disease. Antibiotics and immunizations won't touch these health problems. But modifications of behavior patterns can:

> We have known for many years that cervical cancer could be detected through the papanicolaou smear test, yet only five percent of women over 20 years of age have a Pap smear test each year. . . . We have known for at least ten years that blood pressures could be reduced in selected population groups and that hypertension could be controlled on a large scale yet only half the people who have this condition know it; of those who have it, few follow the lifetime regimen prescribed. *Individual behaviors have a great deal to do with health outcomes. With informed and "health-activated" citizens, there could be considerable reduction in morbidity and mortality.*[3]

THE PREVENTATIVE EDUCATION MODEL

Solutions to the health care crisis abound. Health maintenance organizations, a national health service, and various forms of national health insurance are just a few. But while such innovations may be necessary to maintain the traditional treatment model of medicine, more money for health care delivery is unlikely to produce proportionally more benefits. The last 10 years, characterized by growing dissatisfaction with health care, have paradoxically seen a growth in spending on health care--from $39 billion in 1965 (5.9 percent of GNP) to $120 billion in 1975 (8.3 percent of GNP).

Health education is an alternative to expanded, but less efficient, health care delivery. It's a preventative approach to medicine, which ideally could:

- inform people about health, illness, disability, and protection of their own health, including more efficient use of the delivery system;
- motivate people to want to change to more healthful practices; and
- help them adopt the necessary skills to maintain healthy lifestyles.

Almost everyone has had some health education--in introductory classes in elementary schools or through media campaigns like the recent efforts of the American Cancer Society or the American Heart Association. And there are spotty efforts to increase health education. A few health cooperatives have inaugurated programs to inform their members about health practices and nutrition. Some women's groups have evolved medical self-help groups which help their members explore health problems specific to women. Also, several medical care guidebooks now encourage their readers to use a doctor solely as a resource person, to view health care more as a lifestyle rather than a cure.

Still, of all the billions of Federal, state, and local funds allocated to health care, less than one-half of one percent is spent on health education. Virtually all of the money supports the medical-technical "treatment" approach to health--"the discovery of more effective drugs and treatments, the development of better equipment and facilities, the preparation of more highly skilled and knowledgeable health care personnel, and the improvements in the organization and delivery of health care services."[4]

RECOMMENDATIONS

The medical establishment, with its artillery of state and Federal funds, has a stake in the treatment approach to health; a shift in its priorities to health education is thus unlikely. Instead, the health care revolution will have to be led by a coalition of voluntary associations,

philanthropic foundations, and dissatisfied consumers of health care. As a first start, such groups could focus on the following types of programs:

- *Patient education*. People can ignore the most convincing arguments about the adverse effects of smoking or drinking or improper eating habits. One way to make health education more effective, then, is to target groups who have a strong motivation to change their behavior. Hospital patients are prime candidates. Studies have shown that efforts to educate and counsel patients are extremely effective in reducing rehospitalization rates, yet despite the logic of this approach, very few hospitals can afford the time and expense involved.

  Private funds are needed to *develop patient education materials* and *fund personnel for sample programs*. Demonstration of successful programs may well lead to more widespread support from the public sector or the major medical insurance companies.

- *Media approaches*. Surveys show that a majority of Americans look to two sources for information about their health--their physicians and television commercials. Unfortunately, most doctors are far too busy to promote health education, and commercials are too promotional. But the reliance on television ads suggests that the medium may have some special advantages for health education. A good funding prospect here is the *self-testing television special*. People like to show how much they know, and even wrong answers provide a learning opportunity.

  Equally important is the shaping of information to change behavior. Most people "know" that smoking has severe health impacts. Why do they tune out this information? We don't know. What is the proper balance between scare tactics and purely informational tactics? We don't know. We don't really know why some health education programs succeed in changing behavior while others fail. These problems suggest the need for *communications research and test programs to evaluate the effectiveness of different media*

mixes for health education. One recent Stanford University study, for example, compared the impact of a "mass media blitz" on sample communities to alternative approaches to health education. The study found that the high level of media saturation--which included television and radio spots, minidramas, newspaper columns, and mailed printed materials--proved effective in reducing the behavior patterns associated with heart disease. Such research is currently rare and deserves further support.

- *Medical self-help programs*. The budding efforts at medical self-help can provide models for community health education programs. Such programs provide the resources for self-education. These resources may range from instructional materials and self-examination tests to group self-help meetings and health cooperatives. Unfortunately, the self-help approach to health currently reaches only a small portion of the population--primarily young, middle-class adults. But the problems of health care weigh most heavily on other groups. By virtually every measure, the poor and the racial minorities fare worse than the rest of the population. They don't live as long; they have more chronic illnesses; and they suffer far more infant and maternal deaths.

  To extend the self-help concept to those who need it most, the Foundations could establish *pilot self-help facilities--instructional materials, counseling services, and meeting places--for minority groups*. These facilities could be coordinated with other community programs in which the target populations are already active, like churches or ethnic clubs. In addition, it will be important to develop *culture-sensitive self-help materials*. Many minority cultures have a rich medical folk wisdom which may conflict with the practices of Western medicine. In addition, they may have special language requirements. The success of the self-help programs for such groups will thus depend on the skill with which materials are adapted to their culture.

FOOTNOTES

[1]Barbara and John Ehrenreich, *The American Health Empire*, New York: Random House, 1970, p. 3.

[2]Paul R. Mico and Helen S. Ross, *Health Education and Behavioral Science*, Oakland, CA: Third Party Associates, 1975, p. 1.

[3]Ibid., p. 8.

[4]Ibid., p. 5.

The Adult Illiterate

"I remember a sign in front of a high school building, a great big, beautiful freshly painted sign that said: 'Adult Basic Education Classes Meet Here Wednesday Night at 7:30.' Now if I can't read or write, that's the last damned place in the world I would show up, because I don't want anybody to know I can't read or write. I have spent my entire life keeping it a secret."

THE ADULT ILLITERATE

Up until a year ago, Herbert Green, a truck driver in Montgomery, Alabama, couldn't read a single printed word. He managed to do his job by memorizing the routes he had to take. Since he could not pass a written driving test, he carried in his wallet a driver's license that belonged to a cousin. Somehow, in this age of frequent fender-benders, Mr. Green managed to avoid legal entanglements that might have exposed his illiteracy. All the same, he began to suspect that life might be a lot simpler and above board if he could just read.

Herbert Green has plenty of company. Approximately one out of every five American adults is illiterate--unable to read at an eighth grade level. The illiteracy rate is highest in the South, where 25 percent of the adult population cannot read. In the Northeast, Northcentral, and Western States, about 15 percent cannot read. In all regions, illiteracy is highest--27 percent--in rural areas; cities over one million are also trouble spots with 21 percent illiterate, while cities under one million still count 15 percent of their population illiterate. But in spite of the number of adult illiterates, the problem of illiteracy is a lonely one.

A LONELY PROBLEM, A COMMUNITY PROBLEM

In a paperbound society of signs, forms, and application blanks, illiterates must work hard to hide their secret. The deceits practiced day after day for years would seem unbelievable if they were not described again and again by workers in the field: the business manager who, when asked to read something, excuses himself with a "You do it, I'm busy" and makes up with an awesome memory and a great deal of conversation; the woman, married for 12 years, who gives adult education workers another address because her husband doesn't know she can't read; the man with two

daughters who have grown up to be qualified teachers, ignorant that their father is illiterate; the farmworker who tattoos his name and address on his arm so that he can copy the shapes when he has to fill in a form.

The defenses are often elaborate and very clever. But the costs to the individual are often high. Illiteracy stands in the way of employment. It interferes with sound management of the family economy and with personal and family health. And without literacy, government and community resources are often beyond grasp.

Illiteracy also creates costs for the community. In 1970, males between 25 and 34 years of age who had not completed high school cost the nation:

- $237 billion in income over their lifetime and
- $71 billion in "lost" government revenues, of which
- $47 billion would have been added to the Federal treasury, and
- $24 billion to the treasuries of state and local governments.

And these figures do not include prominent, but hard-to-measure social costs--like the role of illiteracy in the perpetuation of the poverty cycle, unemployment, and higher crime rates, for example. The cumulative cost is clearly sufficient to make adult illiteracy a massive educational problem.

BUT CLASSROOMS DON'T ALWAYS WORK

The traditional approach to the problem of literacy has been to offer classroom opportunities for adults to upgrade their skills. The Adult Basic Education Program (established with the passage of the Economic Opportunity Act in 1964) takes this approach by offering people 16 years of age and older the opportunity to develop reading, writing, language, and arithmetic skills. In 1974, this program served almost one million people.

But the program has had "mixed reviews." For example, a national study funded in 1973 by the Office of Education showed that some participants gained employment, increased their earnings, and raised their

educational levels. However, about one-third of all enrollees either made no gain or regressed. Also, over a six-month period, more than 60 percent of the enrollees left the program. Thus, although the adult education program has had positive achievements, it is successfully reaching only a small fraction of those who need it.

The obstacles to success of a direct, classroom approach are severe. They range from the problems common to all adult learners--fatigue after a day's work, lack of financial resources, lack of time, and lack of transportation--to those peculiar to the adult basic education student--lack of self-confidence and the overriding embarrassment of being discovered by friends and labeled as an illiterate. Particularly in rural areas, where everyone knows what his neighbors are doing, pride is a major barrier between the illiterate and a literacy class. Besides, the school building has never been a friendly haven for the illiterate; after all, it's usually where his troubles began.

RECOMMENDATIONS

To overcome these obstacles, literacy programs will have to focus on both the recruitment of illiterate adults and the delivery of adult basic education. Let's take these one at a time.

- *Recruitment programs*. Adult basic education programs have faced the problem of recruiting students since the programs themselves were conceived. Illiterates cannot respond well to the printed word. Therefore, posters, billboards, flyers, or other printed materials are virtually useless in attracting their attention. In some states, a localized, predominantly visual-aural recruitment package of television, radio, and printed graphics has proven effective in recruiting the adult illiterate. But the major tool for reaching illiterates has been person-to-person recruitment, and person-to-person programs rely heavily upon the available time and communication skills of the recruiter.

While large-scale attacks on the problem of illiteracy are clearly the responsibility of the public sector, the private sector can work to make literacy programs more acceptable in the community. It can also foster innovation in adult basic education. For example, *specially-tailored recruitment packages* could be designed to appeal to subgroups of the illiterate population--the elderly, minorities, or the rural farmer. These might be developed in cooperation with community groups, such as Kiwanis or farm organizations. *Media specials* could both motivate the illiterate to seek help and alert the public to the sensitive problem of illiteracy. And *programs to train volunteers for one-to-one recruitment* could identify the most successful approaches and assist newcomers in developing the skills for reaching a higher proportion of the illiterate population.

- *Brown-paper wrappers*. In view of the stigma attached to illiteracy, delivery of educational programs must be as discrete as possible. The home is thus a logical place to teach the illiterate. Homes can easily be reached by all sorts of media--television, the mails, telephones, and home visitors. Home is a convenient setting for the housewife with several children or for the father who wants to stay in after a long day at work. And, by remaining in his home, the adult can avoid parading his illiteracy down to the Wednesday-night meetings at the high school.

  The question then is: How do we best bring adult basic education into the home? The most common complaints about instructional materials are that they are "boring" and "insulting." *Television courses*--now used only rarely--have a rich potential for bringing instruction to the anonymous illiterate. But program style is a major problem. One television student described her course as "the best sleep I had that eight weeks." On the other hand, Sesame Street-like programs are viewed as insulting. Seeking approaches with greater audience appeal, some adult education programs are now experimenting with soap opera and news magazine formats for television learning.

Programmed learning packages which are relevant to the learner's own interests could be more meaningful than mass media programs, but they provide little opportunity for human feedback. A *mix of media*--programmed learning plus television plus a home visit or telephone assistance--deserves a try.

The Elderly

Throughout history, we find people whose mental powers have not decreased with age, whose artistic and intellectual powers have in fact intensified in later years. Michelangelo was still producing masterpieces at 89. Goethe completed the second part of *Faust* when he was 82. Wagner finished *Parsifal* at 59, and Voltaire wrote *Candide* at 65. Handel was still composing beautiful music and Longfellow was writing immortal poetry after 70. Some of the greatest tasks ever undertaken were begun and carried through in what are called life's declining years.

THE ELDERLY

There will be a morning when I look in the mirror and see an old sunken-cheeked stranger with scared eyes and a mouth like a sea urchin's.

I can stand it and I really ought to try not to let it and other things make me crabby. But I damn well don't look forward to it, and I don't like any of the signs that the cookie has already started to crumble. The other day at the museum the young thing at the gate took one look at me and said brightly, "Senior citizen, sir?" and passed me out half-price tickets. That shook even Ruth. The way I felt, half price was an overcharge.

Wallace Stegner
The Spectator Bird, 1976

Even as the ranks of the elderly have been growing, their status in our society has steadily deteriorated. The multigenerational family of grandparents, parents, and children living under the same roof has yielded to the isolation of the elderly in an apartment or the artificial atmosphere of the retirement village. A national climate of youth worship has changed attitudes toward aging from deference to disdain. Thus, despite the individual circumstances of older Americans, they are frequently perceived by others as narrow-minded, conservative, "played out," and even pitiful.

Yet most of us know individuals in their 60s, 70s, or 80s who are alert and flexible, searching out new ventures for their later years. Many have impelling vocational and educational interests. One-third of the elderly continue to work in some important way:

> At 96, Irvin F. Westheim is still brimming with delight at having founded the Big Brothers movement in 1903. Until 1975, he went to his downtown brokerage office in Cincinnati daily. But at 95, he had surgery and decided to retire from active business, the only concession to the passing years. Since retiring, he continues to keep a

full-time secretary busy with his correspondence on Big Brothers matters and with his work on Junior Achievement. He has also recently taken up the sport of high-powered motorcycle riding.

* * * * *

When classes started in September 1976 for 28,000 students at San Jose State University in California, Gertrude Monahan was among them. An 82-year-old member of the senior class, she is completing work on her B.A. degree in Spanish.

* * * * *

Joseph Schoenberger, a 100-year-old retired diamond setter, took a particularly heavy class schedule last year. After finishing "China Today," he took two nine-week courses simultaneously: "Aging in Other Societies" and "Current Issues: Watergate." "I feel like 75," says Mr. Schoenberger.

* * * * *

These are active, involved individuals. There are thousands like them throughout the country, and many more who could be like them with the right support, with the right kind of educational opportunities.

EDUCATIONAL NEEDS: SOME COMMON FALLACIES

Unfortunately, misconceptions about the educational needs of the elderly often mean that the "right opportunities" are not available. Consider the following common fallacies:

Fallacy: People over 65 simply do not want any more education. It is too late for them to pursue new academic interests.

Fact: Not so. Recent national surveys indicate that approximately 58 percent of the elderly are interested in pursuing educational activities.[1]

Fallacy: Older people are unable to learn new things.

Fact: Intelligence and the ability to learn do not necessarily decline with age. Speed of response and manual dexterity may decline, but learning itself does not.

Fallacy: Older people are interested only in simple types of entertainment, not academic courses or jobs.

Fact: There are divergent interests among the elderly just as there are among other age groups. But with the elderly, real options for expressing these divergent interests are often not provided. Rather, older people are usually expected to spend their time in simple entertainment, in programs such as bingo or crafts. While these programs serve the needs of one segment of the elderly population, many elders attend them, not out of preference, but simply because they are the only available options. Many more do not participate at all.

In 1971, the White House Conference on Aging identified four areas of real educational needs shared by the vast constituency of older Americans--those who no longer hold regular jobs but who seek more than entertainment.[2] First are *adjustment needs*. Most people retiring from working life face reduced incomes, increasing social isolation, flagging energies, and a feeling of being superfluous; education could help them cope with this new and unfamiliar life situation. They also have *identity needs*. They need to find new outlets for skills and interests previously absorbed by a job in business or a place in the community; they need to reestablish themselves as recognized, significant individuals. Third, the elderly have *participation needs* to develop their role as significant members of a participatory democracy. Finally, there are *fulfillment needs;* like everyone else, the elderly need to feel that they are of service to the community.

TO MEET THESE NEEDS . . .

These needs suggest some innovative approaches to education for the elderly. And some schools have indeed responded with novel programs. For example, the College of Marin, in California, has created an Emeritus College for those over 55. The courses cover a wide range of topics, including writing, law, consumer rights, investments, psychosocial development in the later years, photography, Greek dancing, languages, yoga, and literature.

In another case, Edmonds Community College in Washington State has cooperated with the Area Agency on Aging and the local Bar Association to set up a paraprofessional program. Students prepare for legal research, work in consumer and civil rights, and estate management. The legal assistants may be paid or voluntary aides in a law practice, the public defender's office, the prosecutor's office, or in a variety of community agencies.

Rochester Community College, in Rochester, Minnesota, is a third example. The school has developed a senior citizen theatre, operated by and with the elderly.

Fairhaven College, in Washington, sponsors a multigenerational living experiment called "The Bridge." Adults between the ages of 60 and 80 live in a campus dormitory that also houses day-care centers for preschoolers. In addition to attending classes, lectures, and concerts, the oldsters are helping out in the day-care center and providing valuable guidance and perspective for their younger campus neighbors.

Finally, "Over Easy," a pilot television program funded by the U.S. Department of Health, Education, and Welfare, the Administration on Aging, and the Corporation for Public Broadcasting, was aired in September 1976. This program represents the first efforts ever undertaken on national television to provide entertainment and information on a daily basis for people 55 years and over. It also broadcasts a local telephone number that viewers may call for information on the resources and benefits available. Viewers are invited to write to a national post office box for information or to offer comments on the program. This program is expected to be aired daily beginning in the fall of 1977.

RECOMMENDATIONS

In 1900, only 1 in every 25 Americans was over 65. Today, the ratio is nearly 1 in 10. And by 1985, senior Americans will constitute one-ninth of the population. To meet the needs of this growing population, a number of educational and community agencies have developed a variety of programs

like those described above. These programs now need to be expanded geographically, upgraded, and coordinated, as suggested by the following program recommendations:

- *Senior volunteers*. According to a 1965 Harris poll, one-third of all retirees find retirement "less than satisfactory." "Giving up work" was listed as one of the major reasons for dissatisfaction. Volunteer work could offer many retired people opportunities to rechannel their energy to areas where their skills are vitally needed.

  Attention might therefore be given to educational *programs to train elders as volunteers or paraprofessionals*. They might learn to work in such settings as: *child development; education* (as aides in public schools, museums, and libraries); *health* (as aides in homes, hospitals, and clinics); *recreation therapy; criminal justice and legal assistance;* and *safety of the elderly*.

- *Legal education programs*. The legal system can be overwhelming to many older people. Attempts to remove some of the "legalese" and make the law more understandable to the ordinary individual have only just been initiated. Also, many elderly need special counseling in the legal problems specific to their age group.

  In order to help overcome these problems, funds are needed to *set up courses or clinics for dispensing legal education to the elderly*. Such clinics could focus on how the law affects retired persons, what special provisions are available for tax relief, how to set up trusts for conserving inheritances, how to make the most effective use of available insurance, and how to obtain legal counsel. Funds are also needed to *train legal counselors for the elderly*.

- *Education through mass media*. The elderly are often confined to their homes because of illness or physical disabilities. They typically have difficulty in obtaining transportation. Thus, for

the elderly, television, radio, newspapers, and magazines are life lines; they have the potential for reaching older people, giving them needed information, and encouraging them to become more involved in their communities.

The Foundations might sponsor *television and radio series* which *provide information to the elderly* in such areas as *nutrition, exercise, community programs, and legislation.* Support could also be given to more *formal educational programs through television, radio, and correspondence courses.*

- *Supplementary services.* Because of their age, physical disabilities, and fixed-income status, the elderly are often unintentionally deprived of services that, in turn, prohibit them from pursuing existing educational programs. Lack of information and transportation are two of the most severe problems which elderly face. Thus, funds are needed to support *counseling and referral centers that assist the elderly in exploring education opportunities, new career possibilities, and volunteer positions.* Support is also needed for better *transportation systems* for the elderly, such as minibus service to senior citizen and adult education centers.

- *The elderly as teachers.* The knowledge and skills of many older people represent an invaluable part of our heritage that should be preserved. Older people can be a major source of historical information. Many are also skilled in crafts that, because of the rapid changes brought on by technology, could easily vanish. To preserve this heritage, the elderly could become involved in educational programs as teachers rather than students. However, there are presently few channels for them to share their knowledge and craft.

  The Foundations might support programs to *collect stories and oral histories from the elderly.* Tape-recorded interviews have recently emerged as one important method of collecting this information. *Funds are also needed to help preserve craftsmanship of*

the elderly through organizations such as crafts groups that support older craftsmen in conducting training programs for younger apprentices. Older craftsmen could also be encouraged to teach workshops in schools and adult education centers.

FOOTNOTES

[1]K. Patricia Cross, John R. Valley & Associates, *Planning Non-Traditional Programs*, San Francisco: Jossey-Bass, 1974, p. 22.

[2]1971 White House Conference on Aging, *Never Too Old to Learn*, a report submitted to the Edna McConnell Clark Foundation by the Academy for Educational Development, Inc., June 1974, p. 7.

Low-Income Women

"Being on welfare and not having any kind of income nor any hope of a good career until now has been very depressing. This new possibility of an opportunity to learn a career where I can support my daughter and myself and do it on my own without welfare assistance is a new ray of sunshine."

LOW-INCOME WOMEN

For the low-income woman, education is a "bread-and-butter issue." Maybe she's an inner-city mother, working to support two sons. Or a rural wife with few prospects for employment. Maybe she never thought about going to college, or maybe she never had a chance. For her, higher education is an opportunity to change her world--a chance to leave tedious jobs and poverty behind.

A STUDENT PROFILE

Who is this woman for whom education might make such a difference? Chances are, she's a very capable person. She's probably older than her years. And she may be highly motivated to learn, like Theresa Thomas:

> For the past year and a half, Theresa has led a committee to guarantee low-income housing in her downtown neighborhood. When the city approved plans to "renew" the area by building a business and shopping complex, she joined with her neighbors to protect the older, low-rent homes from destruction. She went to city hall. She went to the media. And, with her neighbors, she got the city to consider alternative sites for the complex. Now she wants to continue her fight as a professional. So she's enrolling in a program in urban planning.

Many low-income women who enroll in college are like Theresa. They have worked in their communities and have, in some sense, experienced success. Often, they've been involved in community struggles for better schools, housing needs, and welfare rights. They may also have been active--as clients, advisory committee members, or paid employees--in government agencies and human service programs. They know that, with a proper credential, they can do more than scrub floors or collect welfare. They feel that they

have the experience and maturity to contribute to the academic world as well as learn from it.

Of course, there's another kind of low-income woman who turns up in the college classroom. She's probably never really thought about going to college. As a child she may have had to care for younger members of her family, and as an adult, she continues to bear heavy family responsibilities. In short, she faces an unbroken pattern of low-paying jobs and responsibility for others:

> From 1970 to 1974, the number of poor families headed by women had risen by 21 percent, while those headed by men had declined by 17 percent. For several million of these women, the barriers impeding the climb continue to be inadequate training and education for the current job market, and, in some cases, heavy child care responsibilities. More paid employment would seem to be the solution, but in reality most of these women are at the lower end of the occupation ladder. Unless they can penetrate the more skilled occupations that pay higher salaries, they will not be able to provide their families an adequate or comfortable living.[1]

How does a woman--apparently trapped by poverty--find her way to the world of higher education? She usually needs outside help--someone to motivate her, someone to build her confidence. But once in a learning program, she may become a model student. After all, the rewards are substantial.

NO SCHOOL TODAY

Unfortunately, the barriers to even highly motivated women are substantial. In addition to financial problems, the obstacles include inadequate child-care facilities, inconvenient class times and locations, curricula and teaching methods not well suited to the needs of mature students, and a lack of information about available educational opportunities.

Consider child care. Because of the paucity of public day-care facilities, the problem of juggling childrearing responsibilities and school requirements is severe for most women students. Yet, 70 percent of colleges

and universities surveyed by the Commission for Nontraditional Education reported they had no child-care facilities nor did they provide assistance to students in locating child care. And those with child-care programs had more applicants than they could accept.

With family and work responsibilities, the low-income woman often has trouble finding time for education. She needs classes arranged in blocks of time and in locations convenient to her. But classes at most colleges and universities are scheduled for the full-time, on-campus student. Thus, class meetings on any one day may be spaced out over several hours with large blocks of time between sessions. And they are generally all held on campus--far removed from work or home.

But even if low-income women can arrange their classes around work schedules and child care, many find that traditional college curricula often do not meet their immediate educational needs. These women, like most adults, tend to be problem oriented; they want to apply their learning in the immediate future--not 10 or 15 years from now. Thus, the traditional organization of college curricula into academic disciplines and the slow sequencing of courses are often inappropriate. As pointed out by the Boston Womens' Study Group, many low-income women "already possess a rich knowledge of specific contexts, but are often unable to generalize or lack the general knowledge which would permit them to analyze the specifics. In such cases, traditional liberal arts goals might be achieved by starting with the specifics and working toward the general."[2]

Finally, those who have been away from school for some time and are struggling with the constraints of work and child care often feel lost and somewhat intimidated as they approach the formal academic setting of a college or university. Where to begin? What are the options? Are they ready academically to face a college learning situation? Perhaps most of all, these women need easy access to reliable information about all locally available education opportunities; they need assistance in evaluating which programs will best serve their individual needs. And since they may never have had much formal academic experience, they often need special workshops in basic learning skills, such as note-taking, research, and writing.

RECOMMENDATIONS

With some assistance, many low-income women could be their own best resource for fighting poverty. The following recommendations suggest some of the opportunities for meeting the needs of such students:

- *Model programs*. While a few low-income women will excel in the most traditional college program, many more could benefit from programs tailored especially to their needs. For example, the Foundations might *focus on competency-based education* to build on the experience of this group. The College for Human Services might serve as a model. This New York school accepts only students who are living below the poverty level, training them for the human services professions--social work, counseling, and other services which attract many low-income women. The program combines field work with a core curriculum of behavioral and social sciences. And field work supervisors, as well as classroom teachers, evaluate the competence of each student.

  To build a bridge to more traditional academic programs, *one- or two-semester introductory programs tailored to the needs of low-income women* might be funded. These would provide a starting place for those who lack confidence in their learning ability or who are unclear about their educational goals. Such programs address the whole person by providing support services, such as child-care assistance and counseling services, in addition to academic courses. Two model efforts are underway in California, at De Anza College and San Jose City College.

  Funds might also be channeled into *accelerated credential programs* for women whose career goals require advanced academic degrees. These programs could encourage women to move more rapidly toward their degrees by using such alternatives as credit by exam and credit for experiential learning. The program could also develop accelerated curricula designed specifically for adult students.

- *Faculty workshops*. Many faculty members lack sufficient understanding of adult students to effectively meet their needs. The low-income women in the Boston project reported that instructors too often communicated in a specialized jargon incomprehensible to most students. The most helpful instructors were those who tried to relate the key concepts of their fields to the real-life experiences of their students, who were open to discussing the limitations and modifications of theories, based on students' experience.

  The special faculty requirements--not only for low-income women, but for all adult students--suggest the need for *workshops and summer institutes* to help faculty develop skills for teaching adults. These programs would sensitize instructors to the expectations of their adult students as well as their strengths and special educational needs.

- *New financial aid criteria*. Traditional financial aid criteria have been devised on the assumption that the student is 18 to 21 years old, unmarried, and supported by parents. These traditional criteria often do not reflect the needs of mature adult students, particularly low-income women. For example, child-care expenses, a major burden for many adult women, are not explicitly recognized as an education-related expense on the major financial aid forms. Transportation to class, which may be a significant expense for the commuting adult student, is not covered. And there is no consideration given to lost wages or extra costs for household services incurred when a mother enters college. Limiting financial aid to full-time students further discriminates against many adults who can only attend part-time. The Foundations might therefore *support a study of alternative financial aid criteria which would promote more equitable treatment of low-income women students.*

FOOTNOTES

[1]Beverly Johnson McEaddy, "Women Who Head Families: A Socioeconomic Analysis," *Monthly Labor Review*, June 1976, p. 9.

[2]*Boston Conference on Higher Education for Urban Women*, Preconference Report of the Study Group on Continuing Education for Urban Women, Boston University, Roxbury, MA: Winners, Inc., February 1973, p. 22.

Prisoners

Prisons should become centers for community reentry, places where, among other things, people have a right to be educated, not because they are prisoners but because they are Americans and all Americans have this right.

S. Chaneles
The Open Prison, 1973

PRISONERS

Prisons and jails are filled with society's "rejects." For the most part, they are poor, undereducated, and underemployed. Many are minorities from lower socioeconomic levels, people with an average education of 8.5 years. Moreover, 20 to 50 percent of them are illiterate, while 75 to 90 percent have some learning disability. Were these people not in prison, they would be priority candidates for special education. But prisons are not schools, and prisoner education has not been an easy road to follow.

"PRISONS ARE TO PUNISH"

To much of the public, prisons are to punish. Many Americans are indignant about prisoner rehabilitation. They point to statistics of high recidivism among "rehabilitated" prisoners--a clear indication to them that prisoner education doesn't work. Articles like "Rape, Plunder, and Pillage Your Way through College" liken a prison term to a free college education. Skepticism is high:

> Maybe we're trying to do too much rehabilitation here. Maybe we should strip them of everything and their human dignity when they come in and let them out sooner, and they wouldn't want to come back. I've heard that in France the prisons are terrible and brutal, but they don't keep anyone in them for long. Maybe that's what we should be doing. We only know that what we're doing sure isn't working.[1]

There is, it seems, a fundamental conflict between rehabilitation and punishment. And the priorities of the correctional system in this country are clear:

> The fundamental responsibility of prison management is the secure custody and control of prisoners. This is universally prescribed by custom and public opinion. Although at times such a concept may seem at variance with attempts to introduce rehabilitative services, it is doubtful that any correctional program which ignores this reality will long endure . . . .[2]

These priorities are well reflected in funding patterns. The amount of money spent nationally to reform or rehabilitate criminals is less than 10 percent of what is spent to apprehend, convict, and punish them. The State of California's prison budget for 1972-73 allocated 38 percent of its funds for security purposes--control of the inmates, tear gas, handcuffs, and guards' wages. Treatment, a catch-all for education, counseling, religion, and recreation, accounted for only 13 percent. Education by itself was allotted only 2.3 percent.

This lack of funds means insufficient space and facilities for prisoner education programs. It also means too few prison teachers. A recent survey revealed a ratio of 1 teacher for every 88 prisoners. Furthermore, only 11 percent of these teachers have had special training in the corrections field. John Walsh of the New York City Correctional Institution for Women outlines the problem:

> The vocational shops and the school are empty because there isn't enough staff to supervise the women going and coming from their dormitories or cells. These people have to be supervised . . . that's why correctional officers must accompany them wherever they go. What if they got into a fight? If we weren't understaffed, the women would be freer to go to school and to programs. As it is, we don't have enough staff to accompany them.[3]

RECIDIVISM--THE BOTTOM LINE

In the correctional world, the success of education has a cold, numerical measure: the rate of recidivism. And although 40 to 50 percent of inmates are participating in some educational program, recidivism has been estimated to be between 60 and 80 percent. There are, nevertheless, some isolated reports of success.

For example, a study of 1,000 parolees from the Indiana State Reformatory shows that parole violation rates of prisoners who attended school at the prison were less than half as high as those who did not.[4] The two sample groups of 500 were well-matched according to previous educational attainment, IQ, and reading levels.

A second program, the Upward Bound Oregon Prison Project, has been successful in reducing recidivism rates to about 15 to 20 percent. Now called NewGate, the program focuses on college preparatory students; it allows inmates of a maximum security prison opportunities for higher education, both inside and outside the institution. NewGate is a fine example of what can be accomplished with adequate funding and excellent teachers.

Another pilot program, initiated in 1969, is the Federal City College Lorton Project in Lorton, Virginia. It includes both an academic and job-readiness program. The academic program offers basic precollege courses as well as a distinguished lecture series which brings in community and national figures. The job-readiness program is based on the philosophy that inmates must be trained to become decision-makers rather than mere technicians. To this end, much of the program is managed by the inmates themselves. In 1973, the Department of Health, Education, and Welfare adopted the Lorton Project as a national model, and with additional funding for facilities, it, too, seems to be working. The recidivism rate at Lorton has been less than 15 percent for four years.

RECOMMENDATIONS

Ninety-five percent of all incarcerated people eventually return to society. Yet, it's becoming more obvious that not all of these people can be rehabilitated nor are all educational programs equally effective in promoting rehabilitation. Why have some education programs succeeded while others failed? The answer probably lies in careful targeting of funds to specific programs and groups of prisoners and in adequate administrative and financial backup for ongoing projects. Target areas for funding include the following:

- *Prison teacher training*. At present, prison education relies on part-time teachers with no special prison training, teachers who moonlight after a full day's work in nearby public schools. The penal environment is a distinctly different setting for these teachers, and ideally, they should have special training to prepare them for the differences. But only one college in the United

States offers a full program in correctional education training. Other schools offer some graduate level courses, but these are usually part of a degree program designed to produce persons skilled in criminal justice, law enforcement, and the custodial aspects of corrections.

The Foundations might therefore *focus on college training programs which emphasize special education--training in reading and learning disabilities, guidance and counseling, and studies in behavioral sciences.* They might also establish a link between colleges and prisons to *support student teaching in prisons,* both for teachers in training and experienced public school teachers. Finally, *minorities should be encouraged to enter the field of prison education;* programs in this area could include both programs for minority paraprofessionals in prison education and those for fully certified teachers.

- *The jails.* County and local jails are the first contact with the correctional world for most offenders.* And while many offenders' initial--and often lasting--impressions of the criminal justice system are formed in jails, the correctional situation here is especially poor. Educational programs have generally not been established since short-term incarceration precludes traditional, semester-based classes. In addition, many county jails are in isolated areas, far from teachers and colleges. Thus, jails call for less traditional, short-term learning situations.

  To meet these needs, the Foundations could *provide remote teaching packages* that allow inmates to learn at their own pace and convenience. These packets could include basic courses leading to a General Education Diploma. As a supplement to such modular education, *party-line telephones* could be used to provide a human link-up for questions and discussion.

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*As many as 59 percent of people in jails have not been sentenced or convicted of any crime but are merely awaiting trial.

- *Prison library programs*. Libraries in most penal institutions are either nonexistent or poorly run--an afterthought. The books themselves are often castoffs donated from outside charitable organizations--outdated and of the shoot-'em-up, Tarzan variety. Yet, libraries have the potential for fulfilling both educational and psychological needs of inmates, as expressed by a number of prisoners: "The institutional library has been the main source of my education." And: "The library gave me a chance to use my mind; it challenged me to think and helped me escape the loneliness and sterility of prison life. I talked to a lot of inmates who feel that way. Inmates really need a library, man."[5]

  The Foundations could fund the establishment of a *working library* which would supplement current in-house education programs and provide a quiet place for study. Additionally, funds could be provided for a *librarian training program*. Such a program would provide the special training necessary to set up and manage a library in an institutional setting. A *librarian internship program for prisoners and ex-prisoners* could be established. The trainees would not only gain a sense of responsibility and achievement but would also learn skills which could be used upon release.

- *Occupational training programs*. Much of what passes for occupational training in prisons today has no practical application to the real world of work. How much demand is there for making license plates? A 1973 study discovered that state and Federal correctional institutions offered training in only 56 percent of the major occupations having job openings. Also, inmates need a complete occupational training program, which responds to the whole gamut of inmates' needs--from occupational counseling and testing to job readiness and development of a useful skill.

  To facilitate such a program, the Foundations could *sponsor a series of workshops to help prisoners select and prepare for a job on the outside*. Some workshops could focus on *diagnosis and testing* to enable them to discover where their skills and interests

lie. Such areas as aptitude and personal preference testing, goal-setting, and general occupational counseling could be included. Other workshops could teach *survival skills*. These might include instruction in preparing a resume, filling out a job application, and preparing for an interview. With a blend of skills--unavailable from the "just-keep-them-busy" attitude of present programs--an ex-con would have a better chance to secure and hold down a job.

- *Research in prison education*. At the present time, there is no national center for research on prison education, no central clearinghouse for information exchange, and no vehicle for evaluation of existing programs. George Beto, head of the Texas Corrections System, has said that, with the possible exception of religion, corrections is the least researched institution of modern society. The 1970 Report of the President's Task Force on Prisoner Rehabilitation concluded that: "Because of the almost total lack of basic data about offenders, there is little precise knowledge about what kinds of correctional programs succeed with what kinds of offenders, and no proposals about corrections make as much sense as they should."

  The Foundations could help *establish a National Corrections Foundation* to research and evaluate the state of the art in correctional education. This foundation would *gather information* in the field, *maintain a library*, and act as a *national clearinghouse* for services such as testing, classification, and evaluation of existing and pilot educational programs. Much of this research could be done by graduate students enrolled in correctional education programs. Additionally, the foundation would serve as a vehicle for developing *interchanges among related educational groups* and become the forum for debating problems and issues in prisoner education. With this wealth of both human and physical resources, such a foundation could become a very important link for information exchange among correctional educators and researchers.

FOOTNOTES

[1]Kathryn Burkhart, *Women in Prison*, Garden City, NY: Doubleday & Company, Inc., 1973, p. 269.

[2]*Manual of Correctional Standards*, Washington, D.C.: The American Correctional Association, 1966, p. 483.

[3]Burkhart, op. cit., p. 270.

[4]Michael Reagen and Donald S. Houghton, *School Behind Bars*, New Jersey: The Scarecrow Press, Inc., 1976, pp. 119-120.

[5]Virgil Gulker, *Books Behind Bars*, New Jersey: The Scarecrow Press, Inc., 1973, p. 61.

Midcareer Education and Retraining

It's been said that there are no second acts in American lives. Perhaps--but if not, a good starting point for a second act would be the critical relationship between people and their jobs. After all, "you can't eat for eight hours a day nor drink for eight hours a day nor make love for eight hours a day--all you can do for eight hours is work."

William Faulkner

MIDCAREER EDUCATION AND RETRAINING

In a classic study of the American worker, Studs Terkel uncovers two dominant themes of today's workplace.[1] The first is the overwhelming importance of work to Americans:

> It's the only thing in life you can depend on . . . work has a dignity you can count upon.

The second message is that a great number of workers are very unhappy in their current jobs:

> I'd dread Fridays (at work) because Monday was always looming over me.

Responses to this paradox abound. They include job enrichment, job redesign, worker teams, job rotation, flexible working hours, four-day work weeks, and more. But while all these remedies may have merit, Americans have largely overlooked one fundamental solution: Give the middle-aged worker a fresh start. Open up the possibility of midcareer job changes.

AN UNBROKEN PATTERN

Work dissatisfaction is not a new theme in America. Problems in the workforce have been documented for decades, culminating in the landmark *Work in America* study in the early 1970s. Interestingly, it is difficult to find people who dislike working per se. Most, like stockbroker Ray Wax, conclude their diatribes with wishes for a new job, not for freedom from work altogether:

> Oh, I'll continue to cope. I'll continue to struggle against the machine. I'll continue with my personal disillusionment. Oh, I'd like one morning to wake up and go to some work that gave me joy. If I could build houses all over again.

Surveys tell us that up to 40 percent of the workforce would seriously consider changing jobs[2] and that only a few would choose the same career if they had it to do all over again.

PERCENTAGES IN OCCUPATIONAL GROUPS WHO WOULD CHOOSE SIMILAR WORK AGAIN[3]

Blue-Collar Workers

Unskilled autoworkers	16
Unskilled steelworkers	21
Blue-collar workers, cross section	24
Textile workers	31
Skilled steelworkers	41
Skilled autoworkers	41
Paper workers	52
Skilled printers	52

Professional and White-Collar Workers

White-collar workers, cross section	43
Journalists (Washington correspondents)	82
Lawyers	83
Scientists and mathematicians	89
Urban university professors	93

But the lockstep nature of most career patterns prohibits changes. The common wisdom goes "once a coal miner, always a coal miner." Or "one company, one career, 65 and out." Or in Bob Dylan's words:

Get born
Keep warm
Short pants
Romance
Learn to dance
Get dressed
Get blessed
Try to be a success
Please her
Buy gifts
Don't steal
Don't lift
20 years of schoolin' and they put you on the day shift

A chance at a midcareer change is a chance to break this progression; it's a chance for at least some of the army of dissatisfied workers to upgrade a major part of their lives--their work.

SIGNS OF CHANGE

There are indications that some Americans are breaking out of the "one company, one career" pattern. One percent of adults over 35 are currently enrolled in vocational and technical school. And several societal trends are adding fuel to the fire. Longevity is one. People today simply live longer than their predecessors. While a lifetime in one job may be feasible for someone who will only be in the work force for 20 or 30 years, today's worker can easily envision a working life of 40 to 45 years. That's a long time to pursue one career.

Population shifts, too, are creating pressures for midcareer changes. In 1975, the first of the baby boom children turned 30. This group, which will remain the dominant age group for the foreseeable future, has a tradition of revolutionizing the institutions with which it comes into contact. In the '60s, when many of the boom children entered their teens, we saw the beginnings of the mass youth culture and the revolutions in the universities, in youth lifestyles, and, yes, even in the army. In the '70s, it is the institutions of young adulthood that are feeling the impact of the boom--most notably the social institutions: sexual roles, marriage, and the family. In the near future, it will be the workplace. All of the boom children are now of working age. And as the rate of growth of the

labor force begins to decline--as a result of lower birth rates--we can expect more emphasis on the problems of older workers. The opportunity for midcareer change is one probable target for this new emphasis.

Job obsolescence, too, adds strength to the midcareer movement. Well-publicized are the problems of engineers and scientists: the "knowledge explosion" insures that their education will be obsolete after 10 or 15 years. But automation and technological changes impact other workers as well; just ask press agent, Eddie Jaffe:

> I spent most of my life learning techniques that are of no value any more. Magazines, newspapers--print. The biggest impact today is TV. A client will come to me and say, "I want to be a star." In the old days, maybe I'd get her in *Life*. Today, on the Carson show, you could get more attention than I could have gotten her in a year. . . . It's a mechanical thing today. It's no longer the opportunity to do stunts. They don't work any more. Much of what I've been doing all these years is not as potent as in the old days.

Finally, the trend toward early retirement and the reentry of post-childrearing women into the labor force, for example, both point toward more midcareer emphasis. When all of these trends are summed, it looks like midcareer options for workers will be a hot issue in the very near future.

THE OBSTACLES

In spite of the pressures for change, however, efforts to open up midcareer opportunities will run headlong into some very serious obstacles. For example, changes in attitudes toward midcareer redirection will require institutional support that is lacking today. In France and West Germany, workers have paid sabbaticals, allowing time for them to either upgrade their skills or undertake a complete midcareer reeducation program. Nothing comparable is in the cards in the United States. The American business community has generally resisted changes which could improve midcareer options--changes such as accepting middle-aged workers at entry level positions and promoting part-time "good jobs."

In addition to these institutional barriers, there are often personal barriers to midcareer change. Listen to order clerk Alice Washington:

> Oh, sometimes I become very disgusted with myself and I say to myself, "Do I always have to work like this?" Maybe I should strike out and do something else before I get too old. Age is a great barrier after you wait nine years and try to strike out and do something else.

or hotel clerk Doc Pritchard:

> Suddenly you look in the mirror and you find out you're not twenty-one any more. You're fifty-five. Many people have said to me, "Why didn't you get out of it long ago?" I never really had enough money to get out. I was stuck, more or less.

RECOMMENDATIONS

Despite the enormous institutional and personal barriers to midcareer change, we've all heard of people who have succeeded--the housewife who opened her own restaurant; the lathe operator who, after 30 years in one plant, became a community college vocational instructor; the career secretary who became a certified public accountant after nine years of night school. Today these are relatively rare cases and require exceptional amounts of self-determination. Tomorrow, they will become more common, especially if the required institutional changes can be accelerated. A number of programs can be undertaken today to ease the transition to midcareer mobility:

- *Midcareer advertising*. As with other new movements in this country, the first step toward midcareer change is to educate midcareer prospects to the possibility of change and to make the national population aware of the dimensions of the problem. The Foundations might therefore *sponsor a television special* which: (1) *documents those people who have both succeeded and failed in changing careers* and (2) *examines institutions which have a good reputation for facilitating midcareer changes*. A number of government agencies, the military, and several large corporations--AT&T, Xerox, IBM--all have well-developed reeducation/retraining programs. The publicizing of these types of programs might well encourage union and consumer support for similar activities for other workers.

- *Counseling for midcareer change*. A person planning a midcareer change has a great need for both informational and psychological support. Sharon Atkins may be typical: "I don't know what I'd like to do. That's what hurts the most. That's why I can't quit the job. I really don't know what talents I may have. And I don't know where to go to find out. I've been fostered so long by school and didn't have time to think about it."

  A few counseling centers currently exist on a very small scale. These *model counseling centers* might be expanded--both geographically and in the services they provide. Ideally, a midcareer counseling center would provide such services as *a description of educational and on-the-job training requirements and local opportunities for a given career, realistic advice on the feasibility of change for each individual, lists of local employers who are amenable to midcareer entry level people,* and *skill assessment and vocational testing for clients*. Funds could also be used to *train counselors for these centers* or to *run workshops which target certain client groups,* such as teachers or engineers, who are considering a midcareer change.

- *Curriculum support for midcareer change*. Despite the growing interest in midcareer opportunities and the fact that adults do seem to be changing jobs and careers much more than in the past, there is not a great deal of support for midcareer change from the educational establishment. One problem with existing programs is that they do not often focus on the groups most capable of midcareer change. For example, recent surveys show that the biggest interest in career change is among those people who have had some postsecondary education (but not four years), and who work in low-level white-collar jobs. Experience with midcareer training in other countries shows that the younger workers, 30 to 40 years old, have the best chance of success. Finally, "empty nest" women--those whose families are grown--generally have fewer time and financial problems to overcome and thus are more likely to be interested in midcareer reeducation.

Funds are needed to develop curricula which fulfill the needs of these target groups. Alternatively, support could be given directly to those institutions which have a history of being sensitive to the needs and problems of midcareer changers. For the most part, these are the proprietary schools, community colleges, and extension universities.

FOOTNOTES

[1]Studs Terkel, *Working*, New York: Avon Books, 1975. This is the source for all personal quotes in this section.

[2]Anthony H. Pascal, Duran Bell, Laurence A. Dougharty, William L. Dunn, and Velma Montoya Thompson, *An Evaluation of Policy Related Research on Programs for Mid-Life Career Redirection: Volume II--Major Findings*, The Rand Corporation, R-1582/2-NSF, February 1975.

[3]Task Force to the Secretary of Health, Education, and Welfare, *Work in America*, Cambridge, MA: The MIT Press.

READING LIST

SELF-ASSESSMENT

"Accelerating Obsolescence of Older Engineers," Gene W. Dalton and Paul H. Thompson, *Harvard Business Review*, September-October 1971.

"The Individual: His Privacy, Self Image, and Obsolescence," Paul Armer, *Computers and People*, June 1975.

"The Medical Knowledge Self-Assessment Program," Edward C. Rosenow, Jr., M.D., *Journal of Medical Education*, August 1969.

"Obsolescence and Self-Assessment," Paul Armer, paper presented to the Special Interest Group on Computer Personnel Research of the Association for Computing Machinery, Toronto, Canada, June 1972.

PUBLIC LIBRARIES AS ADULT EDUCATION CENTERS

Final Report, Part 1: The Role of the Public Libraries in Adult Independent Learning, Anne S. Mavor, Jose Orlando Toro, and Ernest R. De Prospo, College Entrance Examination Board, New York, January 1976.

The Public Library in Non-Traditional Education, Jean S. Brooks and David L. Reich, Homewood, IL: ETC Publications, 1974.

Resources for Change: A Guide to Projects 1975-76, Fund for the Improvement of Post-Secondary Education, U.S. Department of Health, Education, and Welfare, U.S. Government Printing Office, Washington, D.C., pp. 35, 87, 94, 135.

"Your Library: A College Around the Corner," Eleanor Toohey Smith, *American Education*, January-February 1976, pp. 7-10.

THE TELEPHONE IN EDUCATION

Electronic Blackboards Permit Graduate Engineering Course Offerings to Engineers in Industry, Jim Seyler, Continuing Education and Engineering, University of Illinois, Champaign, Illinois, 1976.

Extending the Reach of the University with Narrow-Band Telecommunications: The Present and Potential Uses of Slow-Scan Televideo for Continuing, Off-Campus Education, Stuart L. Meyer, The Transportation Center, Northwestern University, Evanston, Illinois, Working Paper, October 1975.

"Interactive Lectures," Stewart W. Wilson, *Technology Review*, January 1972, pp. 50-57.

"A Study of Users' Reactions to Two Telephone Teaching Systems at the Open University," Sue Holloway and Sandy Hammond, *The Status of the Telephone in Education*, compiled by Lorne A. Parker and Betsy Riccomini, University of Wisconsin-Extension, Madison, Wisconsin, 1976.

Teaching Information Retrieval Using Telediscussion Techniques, Edward M. Heiliger, Center for Library Studies, Kent State University, Ohio, 1972.

The University of Quebec Audio Conferencing System: An Analysis of Users' Attitudes, Hilary B. Thomas and Ederyn Williams, Communications Studies Group, University College, London, July 1975.

HEALTH EDUCATION

The American Health Empire, Barbara and John Ehrenreich, New York: Random House, 1970.

"Communicating for Health: Unselling Heart Disease," Nathan Maccoby and John W. Farquhar, *Journal of Communications*, Summer 1975.

Forward Plan for Health 1977-81, Public Health Service, U.S. Department of Health, Education, and Welfare, Washington, D.C., June 1975.

Health Education and Behavioral Science, Paul R. Mico and Helen S. Ross, Oakland, CA: Third Party Associates, 1975.

Medicine in a Changing Society, Corey, Saltman, Epstein, St. Louis: C. V. Mosby, 1972.

THE ADULT ILLITERATE

A Model to Recruit Functionally Illiterate Adults into Adult Basic Education Programs in Massachusetts, School of Education, University of Massachusetts, Amherst, August 1971.

Report to the Congress: The Adult Basic Education Program: Progress in Reducing Illiteracy and Improvements Needed, Office of Education, U.S. Department of Health, Education, and Welfare, Washington, D.C., June 4, 1975.

"Rural Family Development Project," Larry Van Dyne, in *New Colleges for New Students*, San Francisco: Jossey-Bass Publishers, 1974.

THE ELDERLY

Address by Robert N. Butler, Director, National Institute on Aging, National Institutes of Health, NIA Open House Speakers Forum, May 1, 1976.

Community Colleges Respond to Elders: A Sourcebook for Program Development, Lillian L. Glickman, Benjamin S. Hersey, and I. Ira Goldenberg, National Institute of Education, U.S. Department of Health, Education, and Welfare, U.S. Government Printing Office, 1975.

"Innovative Educational Opportunities for Older Persons," Frances G. Scott, *Adult Leadership*, April 1974, pp. 337-343.

Never Too Old to Learn, New York: Academy for Educational Development, Inc., December 1974.

"Special Section: Lifelong Learning, The Back-to-School Boom," *Saturday Review*, September 20, 1975, pp. 14-29.

LOW-INCOME WOMEN AND EDUCATION

Boston Conference on Higher Education for Urban Women, Pre-Conference Report of the Study Group on Continuing Education for Urban Women, Boston University, Roxbury, MA: Winners, Inc., February 1973.

"The College for Human Services: A Model for Alternative Professional Education," Laura P. Houston and Audrey C. Cohen, *New Generation*, vol. 54, no. 4, 1972, pp. 22-28.

"Inner City Women in White Schools," Bernice J. Miller, *The Journal of Negro Education*, vol. 42, 1973, pp. 392-412.

A Question of Opportunity: Women and Continuing Education, Kathryn L. Mulligan, National Advisory Council on Extension and Continuing Education, Washington, D.C., 1973.

Sex Discrimination in Education: Access to Postsecondary Education, Helen S. Astin, Michele Harway, and Patricia McNamara, Higher Education Research Institute, Los Angeles, California, February 1976.

PRISONERS

Books Behind Bars, Virgil Gulker, Metuchen, NJ: Scarecrow Press, Inc., 1973.

Crime in the United States, Uniform Crime Reports, Federal Bureau of Investigation, Washington, D.C., annual.

New Designs for Correctional Education and Training Programs, paper, Sylvia McCollum, Education Research Specialist, Federal Bureau of Prisons, 1973.

School Behind Bars, Michael Reagen and Donald S. Houghton, Metuchen, NJ: The Scarecrow Press, Inc., 1976.

Trends in Offender Vocational and Education Programs: A Literature Search with Program Development Guidelines, Sylvia D. McCollum, paper prepared under grant OEG-0-74-9064 for The Fund for the Improvement of Postsecondary Education, U.S. Office of Education, Washington, D.C., January 30, 1975.

MIDCAREER EDUCATION AND RETRAINING

Americans in Middle Years: Career Options and Educational Opportunities, Alan Entine, ed., Ethel Percy Andrus Gerontology Center, University of Southern California, Los Angeles, 1974.

Barriers to Adult Career Change, Ronald H. Fredrickson, Francis U. Macy, and Donn F. Vickers, Regional Learning Service of Central New York, Syracuse, New York, 1975.

Career Guidance for Adults, Laurie R. Harrison, American Institutes for Research, Palo Alto, California, January 1971.

An Evaluation of Policy Related Research on Programs for Mid-Life Career Redirection, Anthony H. Pascal, The Rand Corporation, Santa Monica, California, R-1582/1-NSF, February 1975.

Work in America, report of a Special Task Force to the Secretary of Health, Education, and Welfare, Cambridge, MA: The MIT Press.